Syllabus: COSC 4800/ MSCS 5800 – Principles of Database Systems (Spring 2021)

Course Instructor
Dr. Praveen Madiraju

Office
377 Cudahy (CU) Hall, 1313 W. Wisconsin Avenue, Milwaukee WI 53233
praveen.madiraju@marquette.edu; 414-288-6340

Contact Information
http://www.cs.mu.edu/~praveen/

Office Hours
MW 3:00-4:30PM and by appointment through e-mail.

Course Details
Class meets MoWe 5:00 - 6:15 PM in CU 412 and online

Course Web Page
Follow the course page from "Instructor home page"

Course Text

Prerequisites: COSC 2010 or COSC 2100 (Data Structures) and programming skills in Java.

Topics to be covered:
Database concepts and architecture, database design techniques, ER modelling, object data modelling, database integrity, SQL, database access from application programs and web using JDBC, if time permits NoSQL technologies and Apache Spark.

Learning Outcomes: Upon completion of this course, the student will:
1. Understand the basic theoretical knowledge of database management system;
2. Familiarise with oracle database and learn to use SQL;
3. Gain experience with the design and development of database and database related applications.

Grading Basis:
1. Undergraduate Students:
Midterm Exam – 15%; Assignments – 35%; Final Exam – 22%; Class Participation and In Class Exercises – 8%; Group Project – 20%
2. Graduate Students:
Midterm Exam – 15%; Assignments – 32%; Final Exam – 20%; Class Participation and In Class Exercises – 8%; Group Project – 15%; Survey Paper – 10%

The final grades for undergraduate students will be based on:
A: 95 – 100; A- : 89 - 94; B+ : 83 – 88; B : 77 – 82; B- : 71 – 76; C+ : 65 – 70; C : 59 – 64; C- : 53 - 58; D+ : 52 – 57; D : 46 – 51; F : 0 – 45

The final grades for graduate students will be based on:
A: 95 – 100; A- : 89 - 94; B+ : 83 – 88; B : 77 – 82; B- : 71 – 76; C+ : 65 – 70; C : 55 – 64; F : 0 - 54
Course Policies

1. Students are responsible for all material presented in lecture. Exams will cover all lecture material. Exam coverage and topics will be notified well before the time of the exam. Exams must be taken on the hour they are scheduled. They will not be given early, and can be made up only if documented evidence of medical emergency or death in the family is presented before the time of the exam.

2. Late Assignments: 15% penalty for 1-2 days late; 30% penalty for 3-5 days late; 50% penalty for 6-7 days late. Points will not be given to submissions late by more than 7 days. Late assignments shall not be accepted once the solutions are discussed or posted on course web page.

3. In Class Exercises will be assigned from time to time during the class lecture. It is expected that students actively participate working on the problems and upload their solutions to the class D2l folder. They may not be graded, but evidence of working on the in-class problems and general class participation count towards the “Class Participation and In-class Exercises” grade component.

4. Group projects are to be done with teams of size two to three. Students choose their team members by mutual consent. More details about the group projects will be announced around the midpoint of the semester.

5. Graduate Students ONLY: Survey Paper involves reading technical or research papers on a topic related to newer technologies in databases and writing a report on the topic. More details about the survey paper will be announced around the midpoint of the semester.

6. All work submitted for grading must be the student's own work. Plagiarism will result in a score of zero on the exam or assignment, and/or dismissal from the course. You can review the document on Academic honesty policy in the student hand book or from http://bulletin.marquette.edu/

7. Attendance is vital to success in this class. Any handouts missed will be the sole responsibility of the student. Please refer to the policy on absences in the university bulletin.

8. Any course related communication will be made to the student's official Marquette email address. It is the responsibility of the student to check his/her emails.

9. Students should not use any digital device for non-course related activities such as internet browsing, texting, facebooking, tweeting, instagreaming, snap chatting, etc. during lectures or exams.

10. Due to the COVID-19 pandemic and the safety measures needed to keep you safe, Easter break and mid-semester break (the day after Easter) have been replaced by Mental Health Days spread throughout the semester. These are days for you to rest and, therefore, there will not be any assignments or activities due on these Mental Health Days. Spring 2021 mental health days are: Tuesday, February 9, Wednesday, March 10, Tuesday, April 20, and Wednesday, May 5.

11. Midterm Exam is scheduled for Wed, March.17th during the class time.

12. Final day to withdraw from the course with a W is Friday, April 23, 2021. Final exam is scheduled on Wednesday, May 12, 5:45PM - 7:45PM.

NOTE: This syllabus represents a general plan for the course and deviations from this plan may be necessary during the duration of the course.

Page Author: Praveen Madiraju